What is claimed is:

1. A method of finding the position of an object in a space, the method comprising:

identifying the positions of pixels in an image of the space, which satisfy a condition relating to a pixel property associated with the object;

classifying said positions into a group according to classification criteria; and

producing a group position representation for said group, from positions classified in said group, said group position representation representing the position of the object in the space.

2. The method of claim **1** further comprising producing said image.

3. The method of claim **2** further comprising dividing said image into zones.

4. The method of claim **3** wherein identifying comprises identifying said positions of pixels in a zone of said image, which satisfy said condition.

5. The method of claim **3** further comprising dividing said image into adjacent zones.

6. The method of claim **5** wherein classifying comprises associating said pixel positions satisfying said condition and in a zone, with the same group as pixel positions satisfying said condition and in an adjacent zone and within a threshold distance of each other.

7. The method of claim **1** wherein identifying comprises identifying the position of an up-edge pixel having a difference in intensity relative to an intensity of a nearby pixel, where said difference in intensity is greater than a threshold value.

8. The method of claim **7** wherein identifying comprises identifying the position of a down-edge pixel having a difference in intensity relative to an intensity of a nearby pixel, where said difference in intensity is less than a threshold value.

9. The method of claim **8** wherein identifying comprises identifying the positions of pixels between said up-edge and said down-edge pixels.

10. The method of claim **1** wherein identifying comprises identifying the positions of pixels having an intensity greater than a threshold value.

11. The method of claim **1** wherein classifying comprises associating said pixel positions satisfying said condition and within a threshold distance of each other with the same group.

12. The method of claim **1** wherein classifying comprises classifying said positions into a plurality of groups and combining group position representations of said plurality of groups into a single group position representation.

13. The method of claim **12** wherein classifying comprises associating said pixel positions in the same zone satisfying said condition and within a threshold distance of each other with the same group.

14. The method of claim **13** wherein classifying comprises associating said pixel positions in adjacent zones satisfying said condition and within a threshold distance of each other with the same group.

15. The method of claim **14** wherein classifying comprises associating said pixel positions satisfying said condition and within a threshold distance of each other with the same group.

16. The method of claim **12** further comprising correlating successive group position representations representing positions within a distance of each other.

17. The method of claim **16** further comprising determining whether said successive group position representations are within a target area.

18. The method of claim **17** further comprising redefining said target area to compensate for movement of the object in the space.

19. The method of claim **18** further comprising identifying a pattern in said group position representation.

20. The method of claim **19** further comprising identifying a spatial pattern in a set of group position representations.

21. The method of claim **19** further comprising identifying a time pattern in said group position representation.

22. The method of claim **19** further comprising associating said group position representation with an object when said pattern matches a pattern associated with the object.

23. The method of claim **22** further comprising deleting said target area when said pattern does not match a pattern associated with the object.

24. The method of claim **12** further comprising transforming said group position representation into a space position representation, wherein said space position representation represents position coordinates of the object in the space.

25. The method of claim **1** further comprising executing the steps of claim **1** for each of at least one different image of the space to produce group position representations for each group in each image.

26. The method of claim **25** further comprising transforming said group position representations into a space position representation, wherein said space position representation represents position coordinates of the object in the space.

27. The method of claim **26** further comprising producing a representation of orientation from a plurality of space position representations.

28. An apparatus for finding the position of an object in a space, the apparatus comprising:

means for identifying the positions of pixels in an image of the space, which satisfy a condition relating to a pixel property associated with the object;

means for classifying said positions into a group according to classification criteria; and

means for producing a group position representation for said group, from positions classified in said group, said group position representation representing the position of the object in the space.

29. A computer readable medium for providing instructions for directing a processor circuit to:

identify the positions of pixels in an image of the space, which satisfy a condition relating to a pixel property associated with the object;

classify said positions into a group according to classification criteria; and

produce a group position representation for said group, from positions classified in said group, said group position representation representing the position of the object in the space.

30. An apparatus for finding the position of an object in a space, the apparatus comprising:

a circuit operable to identify the positions of pixels in an image of the space, which satisfy a condition relating to a pixel property associated with the object;

a circuit operable to classify said positions into a group according to classification criteria; and

a circuit operable to produce a group position representation for said group, from positions classified in said group, said group position representation representing the position of the object in the space.

31. The apparatus of claim **30** further comprising an image-producing apparatus operable to produce said image.

32. The apparatus of claim **31** wherein said image-producing apparatus comprises a charge coupled device.

33. The apparatus of claim **31** wherein said image-producing apparatus comprises a complementary metal-oxide semiconductor device having an analog-to-digital converter.

34. The apparatus of claim **30** further comprising a plurality of image-producing apparati.

35. The apparatus of claim **31** wherein said image-producing apparatus further comprises a filter.

36. The apparatus of claim **30** wherein said circuit operable to identify and said circuit operable to classify comprise a common application specific integrated circuit.

37. The apparatus of claim **30** wherein said circuit operable to identify and said circuit operable to produce comprise a common digital signal processor.

38. The apparatus of claim **37** wherein said digital signal processor comprises an operating buffer and a receive buffer, the receive buffer facilitating receipt of data to be processed while the data in the operating buffer is being processed.

39. The apparatus of claim **38** wherein said circuit operable to produce further comprises a computer.

40. The apparatus of claim **30** wherein said circuit operable to identify is operable to identify positions of pixels in a zone of said image, which satisfy said condition.

41. The apparatus of claim **40** wherein said circuit operable to identify is operable to associate said pixel positions satisfying said condition and in a zone, with the same group as pixel positions satisfying said condition and in an adjacent zone and within a threshold distance of each other.

42. The apparatus of claim **30** wherein said circuit operable to identify is operable to identify the position of an up-edge pixel having a difference in intensity relative to an intensity of a nearby pixel, where said difference in intensity is greater than a threshold value.

43. The apparatus of claim **42** wherein said circuit operable to identify is operable to identify the position of a down-edge pixel having a difference in intensity relative to an intensity of a nearby pixel, where said difference in intensity is less than a threshold value.

44. The apparatus of claim **43** wherein said circuit operable to identify is operable to identify the positions of pixels between said up-edge and said down-edge pixels.

45. The apparatus of claim **30** wherein said circuit operable to identify is operable to identify the positions of pixels having an intensity greater than a threshold value.

46. The apparatus of claim **30** wherein said circuit operable to classify is operable to associate said pixel positions satisfying said condition and within a threshold distance of each other with the same group.

47. The apparatus of claim **30** wherein said circuit operable to classify is operable to classify said positions into a plurality of groups and to combine group position representations of said plurality of groups into a single group position representation.

48. The apparatus of claim **30** wherein said circuit operable to produce is operable to correlate successive group position representations representing positions within a distance of each other.

49. The apparatus of claim **48** wherein said circuit operable to produce is operable to determine whether said successive group position representations are within a target area.

50. The apparatus of claim **49** wherein said circuit operable to produce is operable to redefine said target area to compensate for movement of the object in the space.

51. The apparatus of claim **50** wherein said circuit operable to produce is operable to identify a pattern in said group position representation.

52. The apparatus of claim **51** wherein said circuit operable to produce is operable to identify a spatial pattern in a set of group position representations.

53. The apparatus of claim **51** wherein said circuit operable to produce is operable to identify a time pattern in said group position representation.

54. The apparatus of claim **51** wherein said circuit operable to produce is operable to associate said group position representation with an object when said pattern matches a pattern associated with the object.

55. The apparatus of claim **54** wherein said circuit operable to produce is operable to delete said target area when said pattern does not match a pattern associated with the object.

56. The apparatus of claim **30** wherein said circuit operable to produce is operable to transform said group position representation into a space position representation, wherein said space position representation represents position coordinates of the object in the space.

57. A system comprising the apparatus of claim **30** and further comprising:

a housing securable to a movable object movable within a space;

an energy radiator on said housing operable to continuously radiate energy; and

a circuit operable to cause said energy radiator to continuously radiate energy in an encoded radiation pattern; and

an image-producing device operable to produce an image representing at least a portion of the object, said image being represented by a plurality of pixels.

58. A system for finding the position of an object in a space, the system comprising a plurality of apparatuses as claimed in claim **30** and further comprising:

a plurality of image producing apparatus operable to produce respective images of the object in the space; and

a processor circuit operable to produce a space position representation for the object in the space from group position representations produced by respective apparatuses as claimed in claim **30.**

59. The system of claim **58** wherein said processor circuit is operable to produce a representation of orientation from a plurality of space position representations.